

REMARKS

Administrative Overview

Claims 1-27 remain pending in this application and are presented for reconsideration. Claims 1-7, 13, 15, and 19-25 are amended without any intent of disclaiming equivalents thereof.

The undersigned attorney wishes to thank the Examiner for his time, helpful suggestions, and courtesy during the telephonic interview that took place on October 26, 2005. The following discussion is intended to constitute a proper recordation of such interview in accordance with MPEP §713.04, and also to provide a full response to the Office Action mailed on August 18, 2005.

As discussed in the telephonic interview, the invention contemplates a force-sensitive material substantially flush with the surface of the cylinder, without a separate element intervening between the sensor material and the surface of the cylinder. Applicant appreciates the helpful comments made by the Examiner and hereby amends independent claims 1, 6, 19, and 23, and dependent claims 2-5, 7, 13, 15, 20-22, and 24-25 consistent with the discussions during the interview.

Support for amendments to claims 1, 6, 19, and 23 can be found throughout the Specification, for example, at FIGS. 3 and 4 and paragraphs [0032]-[0035] of the application as filed. Claims 2-5, 7, 13, 15, 20-22, and 24-25 are amended to correct for either antecedent basis, indefiniteness, or claim dependency, in line with Examiner's recommendations in the Office action of August 18, 2005. Applicants respectfully submit that the amendments do not introduce new matter.

In the Office action mailed on August 18, 2005, claims 11-14 were allowed, and claims 25-27 were objected to under 35 U.S.C. § 112(2).

Claim 16 was rejected under 35 U.S.C. § 112(1) as failing to comply with the enablement requirement.

Claims 1, 6, 19, and 23 were rejected under 35 U.S.C. § 112(1) as failing to comply with the written description requirement.

Claims 2-5, 7, 15, and 19-25 were rejected under 35 U.S.C. § 112(2) as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention

Claims 1, 2, 5, 19, and 22 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,629,487 to Mucke et al ("Mucke").

Further, claims 3, 4, 20, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mucke, claims 1-10 and 17-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mucke in view of U.S. Patent No. 5,553,801 to Lee ("Lee"), or Lee in view of Mucke, and claims 6-10, 15, 17, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,325,322 to Lewis ("Lewis") in view of Mucke and Lee.

In light of the foregoing amendments, Applicants respectfully traverse the rejection of claims 1-10, and 15-24, and the objection to claims 25-27, and request reconsideration of these claims.

Rejections of Claims under 35 U.S.C. § 112

Claim 16 was rejected under 35 U.S.C. § 112(1) as failing to comply with the enablement requirement. Applicants respectfully submit that support for this claim can be found in the specification, for example at paragraph [0050] of the application as filed ("the actuation device 360 may adjust the web normal force through rotating the cylinder 100, the web-supply, the web-uptake spool, or any combination of the above. As the web is tightened, the normal force exerted by the web increases, and vice versa. The actuation device 360 may involve a drive or a brake"). A proper level of friction is required between the web and the cylinder surface, as outlined in paragraphs [0008]-[0010] of the application as filed. As a result of this frictional force, rotating the cylinder will "pull" the web in the direction of rotation, thus loosening or tightening the web and therefore increasing or decreasing the normal force exerted by the web on the cylinder, and vice versa.

Claims 1, 6, 19, and 23 were rejected under 35 U.S.C. § 112(1) as failing to comply with the written description requirement. The rejected subject matter, namely "*exposed sensors*," has

been removed from these claims, thereby rendering moot the rejection of these claims under 35 U.S.C. § 112(1).

Claims 2-5, 7, 15, and 19-25 were rejected under 35 U.S.C. § 112(2) as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. Claims 19, 23, and 25 have been amended in line with the Examiner's suggestions. Claims 2-5, 7, 20-22, and 24 have been amended to correct antecedent basis. Claim 15 has been amended to correct the claim dependency.

Applicants have also amended allowed claim 13 for clarity. Applicants submit that this amendment does not introduce new matter.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 6, 16, 19, and 23 under 35 U.S.C. § 112(1), and claims 2-5, 7, 15, and 19-25 under 35 U.S.C. § 112(2).

Rejections of Claims under 35 U.S.C. § 102

Claims 1, 2, 5, 19, and 22 were rejected under 35 U.S.C. § 102(b) as anticipated by Mucke. Applicants have amended independent claims 1 and 19 to recite "a plurality of force-sensitive sheets" that are substantially flush or associated with the circumferential surface. Mucke, by contrast, does not teach or suggest force-sensitive sheets that are substantially flush with the circumferential surface of the cylinder. Rather, Mucke teaches a stress-responsive sensor disposed in a recess, with a sensor cover positioned within the recess so as to cover the sensor, as indicated, for example, in Mucke's Figure 3 and at column 3, lines 51 to 54. Further, Mucke teaches that the sensor cover and roller are preferably made of the same or similar material, as indicated, for example, in Mucke's column 4, lines 32 to 35 ("In addition, the sensor covers 3 and the roller 4 *are preferably made from the same materials*, or materials having the same strength, elasticity, wear resistance, and thermal coefficient of expansion." [Emphasis added.]). As such, Mucke teaches a sensor with an inert (i.e., non-force-sensitive) separate element, namely, the sensor cover (3), which is made from the same inert material as the roller and disposed between the stress-responsive surface of the sensor (12) and the surface of the cylinder. Accordingly, the material at the surface of Mucke's cylinder is not force-sensitive, whereas that is precisely what is required by claims 1, 2, and 5.

Moreover, Mucke does not teach the use of a force-sensitive *sheet* as claimed in the present application, but rather teaches the use of a quartz piezo sensor, as indicated, for example, in Mucke's column 4, line 9. Therefore, in light of the foregoing claim amendments, Applicants respectfully submit that amended claims 1 and 19, and their dependents, are patentable over Mucke.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 2, 5, 19, and 22 under 35 U.S.C. § 102(b).

Rejections of Claims under 35 U.S.C. § 103

Claims 1-10 and 17-24 were rejected under 35 U.S.C. § 103(a) being unpatentable over Mucke in view of Lee, or over Lee in view of Mucke. Applicants have amended independent claims 1, 6, 19 and 23 to recite a "plurality of force-sensitive sheets" that are substantially flush with, affixed to, or associated with the circumferential surface of a cylinder. Applicants respectfully submit that the disclosure of Lee fails to cure the deficiencies of Mucke with respect to independent claims 1, 6, 19 and 23. Lee appears to teach a guide pole with a single coating of piezoelectric material that is adapted to generate an electrical signal that varies according to the biasing force from the magnetic tape contacting the guide pole. As such, Lee does not appear to teach a plurality of force-sensitive sheets substantially flush with, affixed to, or associated with the circumferential surface of a web-handling cylinder, as required by claims 1, 6, 19, and 23, but rather teaches a single sensor coated onto a guide pole. Applicants therefore respectfully submit that neither Mucke nor Lee, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at Applicants' invention, as recited in independents claim 1, 6, 19 and 23.

Further, Lee states at column 1, lines 52 to 55: "It is, therefore, a primary object of the invention to provide a tape tension measuring device which is capable of *reducing the number of components to thereby economize the manufacturing cost and space requirement thereof*" [Emphasis added]. Therefore, Lee teaches directly away from the use of a plurality of sensors to detect tape tension.

Claims 6-10, 15, 17, and 18 were rejected under 35 U.S.C. § 103(a) being unpatentable over Lewis, in view of Mucke and Lee. Applicants have amended independent claim 6 to recite a "plurality of force-sensitive sheets, substantially flush with the circumferential surface." Lewis

does not appear to disclose or even suggest a sensing device comprising a plurality of force-sensitive sheets that are substantially flush with the circumferential surface. Applicants respectfully submit that the disclosures of Mucke and Lee fail to cure the deficiencies of Lewis with respect to independent claim 6, at least for the reasons outlined above.

The remaining rejections relate only to dependent claims, which we respectfully submit are patentable in light of the amendments discussed above. None of the references, alone or in combination, teaches or suggests the use of a plurality of force-sensitive sheets, substantially flush with the circumferential surface of a cylinder.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-10, 15, and 17-24 under 35 U.S.C. § 103(a).


CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration, withdrawal of all grounds of rejection and objection, and allowance of claims 1-27 in due course. The Examiner is invited to contact Applicant's undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,

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